

STUDIES OF PACIFIC ISLAND PLANTS, V
NEW AND NOTEWORTHY FLOWERING PLANTS FROM FIJI

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THE FOLLOWING notes, based for the most part upon specimens recently collected by Mr. William Greenwood, include descriptions of three new species. The genera *Pterocymbium* and *Amaracarpus*, both represented by new species, are here first reported from Fiji. Cited specimens are deposited at the Arnold Arboretum (A), Gray Herbarium (GH), and New York Botanical Garden (NY).

PIPERACEAE

Piper crispatum A. C. Sm. in Jour. Arnold Arb. 24: 354. 1943.

VITI LEVU: Lautoka: Mt. Evans, alt. about 1050 m., *Greenwood 1145* (A) (climbing on trees in dense forest; leaves pubescent).

This species has otherwise been known only from the type collection, which was without definite locality. The Greenwood specimen, although sterile, agrees precisely in habit and foliage with the type.

URTICACEAE

Elatostema (§ *Euelatostema*) *Greenwoodii* sp. nov.

Frutex vel herba suffruticosa ad 1.5 m. alta, ramulis juventute angulatis strigosis demum subteretibus glabrescentibus; foliis alternatis, petiolis inconspicuis ad 2.5 mm. longis vel subnullis pallide strigosis, laminis papyraceis in sicco viridibus oblongo-lanceolatis, 5-9 cm. longis, 1.2-2.5 cm. latis, basi inaequilateraliter obtusis, apice gradatim acuminatis, margine dentibus obtusis 1 vel 2 per centimetrum grosse serratis, supra cystolithis confertis linearibus 0.2-0.3 mm. longis ornatis et pilis pallidis ad 1 mm. longis disperse strigosis vel glabris, subtus ad nervos hispido-strigosis et interdum cystolithis paucis ornatis, pinnatinerviis, costa supra paullo subtus valde elevata, nervis lateralibus utrinsecus 5-8 adscendentibus supra planis subtus prominulis, venulis immersis; stipulis submembranaceis lanceolatis 5-9 mm. longis acuminatis dorso strigosis mox caducis; receptaculis ♂ solis visis sessilibus 5-8 mm. diametro, bracteis exterioribus plerumque 6 submembranaceis late ovatis, basi connatis, distaliter liberis, apice acumine 1-1.5 mm. longo corniculatis, extus strigoso-puberulis; bracteis interioribus et bracteolis oblongo- vel lineari-obovatis, 1.7-2 mm. longis, latitudine variis (0.5-2.5 mm.), extus minute strigosis, latioribus apice emarginatis; pedicellis sub anthesi circiter 1 mm. longis, perianthii segmentis 4 oblongis circiter 1.5 mm. longis, apicem versus calcare circiter 0.4 mm. longo corniculatis, filamentis sub anthesi subnullis demum ad 0.8 mm. longis, antheris circiter 0.6 mm. longis.

VITI LEVU: Lautoka: Mt. Evans, alt. about 900 m., *Greenwood 1083* (A, TYPE), Sept. 24, 1944 (shrub, up to 5 ft. high, in thick forest; flower-heads white).

From *E. fruticosum* Gibbs, with which it agrees in habit and in the conspicuous straight linear cystoliths of its upper leaf-surface, *E. Greenwoodii* differs in its shorter-petiolate and much narrower leaf-blades, smaller staminate receptacles, and smaller bracteoles and stamens. In its leaf-shape, the new species more nearly resembles *E. tenellum* A. C. Sm. and *E. humile* A. C. Sm., from both of which it differs in its shrubby habit, the comparatively long straight cystoliths of its upper leaf-surface, and in details of foliage, bracteoles, and perianths.

MELIACEAE

Aglaia Parksii A. C. Sm. in Bull. Torrey Bot. Club 70: 542. 1943.

VITI LEVU: Naitasiri: Near Nasinu, *Greenwood 1136* (A) (tree 6 m. high, with rusty-pubescent inflorescence).

The cited specimen is the second collection of the species thus far known and was obtained in the vicinity of the type-locality. In vegetative features the two collections agree perfectly; the *Greenwood* plant has the leaflets 9 or 11 in number. The present collection bears young inflorescences, from which it is apparent that considerable variation in size of inflorescence is to be anticipated. The panicles of our plant are comparatively ample, up to 13 cm. long and 10 cm. broad, freely branched, and many-flowered. The flower-buds are too immature to permit careful observation.

STERCULIACEAE

Pterocymbium oceanicum sp. nov.

Arbor ad 22 m. alta, foliis ante anthesin deciduis, ramulis robustis glabris teretibus superne 4-5 mm. diametro, cortice in sicco pallido valde ruguloso; foliis ad apicem ramulorum confertis ubique glabris vel subtus disperse et minutissime pallido-stellato-pilosis, petiolis subteretibus 5.5-7.5 cm. longis basi et apice leviter incrassatis, laminis siccitate viridibus chartaceis ovatis, 10-15 cm. longis, 7-11 cm. latis, basi valde cordatis, apice obtusis vel obtuse cuspidatis, margine integris, e basi 7 (vel inconspicue 9)-nerviis, costa et nervis principalibus supra elevatis subtus prominentibus, nervis lateralibus e costa utrinsecus 3-5 leviter curvatis, rete venularum intricato utrinque prominulo; floribus delapsis tantum visis, pedicellis glabris teretibus supra articulationem 6-7 mm. longis; calyce tenuiter carnosio obconico-campanulato 20-25 mm. longo, apice ad 15 mm. diametro, extus glabro intus sparse et molliter pallido-piloso, lobis 5 oblongo-deltaideis acutis sub anthesi recurvatis, 8-9 mm. longis, 5-6 mm. latis; columna circiter 25 mm. longa uniformiter et breviter pilosa; staminibus 15 simplici serie dispositis, filamentis subconnatis circiter 1.5 mm. longis extus sparse pilosis intus glabris, antheris oblongis 2-2.5 mm. longis; carpellis 5 leviter cohaerentibus copiose puberulis, ovario dorso gibboso sub anthesi circiter 1 mm. longo, stylis circiter 1.5 mm. longis superne contractis, stigmatibus pallidis reflexis circiter 0.3 mm. longis; folliculis plerumque 5 immaturis stipite copiose puberulo ad 8 mm. longo incluso ad 5 cm. longis membranaceis ubique puberulis, lobo dorsali rotundato, semine non viso.

VITI LEVU: Lautoka: Mountains near Lautoka, alt. 550-600 m., *Greenwood 1082* (A, TYPE), Sept. 24, 1944, and Aug. 18, 1945 (tree 50-75 ft. high, with wide-spreading branches; leaves clustered at ends of branchlets and light green, deciduous in August; calyx yellow-green without, red-brown within).

This remarkable discovery, which extends the known range of the genus eastward from New Guinea and the Bismarck Archipelago, was first collected by Mr. Greenwood in 1944, at which time fallen flowers and leaves were obtained. The same tree was visited in 1945 and foliage-branchlets were collected. Mature fruits are not yet available.

The new species is characterized by its entire leaves, which are clustered at the ends of branchlets, by its comparatively large calyx, which is pilose within, and by its puberulent follicles. It is perhaps more closely related to *P. viridiflorum* Teijs. & Binn., of Celebes, than to any Papuan species, but that species is said to have glabrous follicles; other minor characters further distinguish the Fijian entity.

APOCYNACEAE

Alyxia linearifolia A. C. Sm. in *Sargentia* 1: 107. fig. 5. 1942.

VITI LEVU: Lautoka: Mt. Evans, alt. about 950 m., *Greenwood 1065* (A) (shrub 3 m. high, on ridge in thick forest; flowers pale yellow).

The cited specimen is the second collection of the species, the type having been from Ra, Viti Levu, at lower elevation. The Greenwood specimen is from a shrub, whereas the type is said to have been from a liana; furthermore, the leaves of the Greenwood specimen are in twos or threes, whereas those of the type are most often in fours, although some ternate or paired leaves are discernible also on the original specimen. In spite of these differences, the two specimens are fundamentally alike, and the species is instantly recognizable.

RUBIACEAE

Amaracarpus musciferus sp. nov.

Frutex compactus multiramis dense foliatus 1-2 m. altus, ramulis ultimis purpurascens teretibus gracilibus apicem versus 0.5-0.8 mm. diametro pilos pallidos pluricellulares hispidulos circiter 0.2 mm. longos copiose gerentibus, ramulis vestustioribus brunnescentibus glabratis cortice ruguloso; stipulis interpetiolaribus membranaceis purpurascens primo lateraliter connatis mox caducis subcalyptratis, oblongo-lanceolatis, circiter 2.5 mm. longis et 1.5 mm. latis, apice obtusis, extus ut ramulis juvenilibus sparse hispidulis; foliis glabris, petiolis minutis ad 1 mm. longis gracilibus teretibus, laminis papyraceis obovato-ellipticis, 5-7 mm. longis, 3-3.7 mm. latis, basi acutis et in petiolum minute decurrentibus, apice obtusis, margine integris et paulo incrassatis, costa supra subplana subtus elevata, nervis secundariis utrinsecus 3-5 patentibus obscuris nervo intramarginali obscure conjunctis supra immersis subtus leviter prominulis; floribus minutis ubique glabris apice ramulorum brevium ultimorum terminalibus, sessilibus, solitariis vel binis; calyce purpurascens obconico 2.5-2.8 mm. longo, tubo gracili, limbo submembranaceo erecto quam tubo paulo longiore apice circiter 1.5 mm. diametro irregulariter 4- vel 5-lobato, lobis deltoideis

vel apiculatis 0.2–0.5 mm. longis; disco conspicuo pallido pulvinate circiter 0.7 mm. alto et diametro; corolla infundibuliformi in alabastro 2.5 mm. longa, tubo immaturo 0.8–1 mm. longo, lobis 4 crasso-carnosis erectis oblongis in alabastro incurvatis circiter 1.5×1 mm.; staminibus 4, antheris sessilibus circiter 1 mm. longis crassis circiter 0.5 mm. diametro; stylo in alabastro circiter 1 mm. longo, stigmatate minute bilobato; fructibus solitariis ovoideo-ellipsoideis 4-angulatis, ad 6.5 mm. longis (calycis limbo persistente excluso) et 4.3 mm. latis, utrinque angustatis, pyrenis ad 6×4 mm. semi-ovoideis utrinque subacutis, dorso conspicue 1-costatis, ventre plano levi.

VANUA LEVU: Mbua: Navotuvotu, summit of Mt. Seatura, alt. 830 m., *Smith 1646* (GH TYPE, NY, etc.), April 27, 1934 (gnarled shrub 1–2 m. high, in dense forest; fruit red).

In its sessile terminal flowers and fruits, as well as in its microphyllous habit, the entity described above appears definitely to belong in *Amaracarpus* Bl., which otherwise has not been recorded in Melanesia east of the Solomons. The species of *Amaracarpus* thus far known from the Solomons and from Micronesia are not closely related to the Fijian species, which shows a close affinity with certain small-leaved New Guinean species. The simple unawned stipules, the completely glabrous corolla, and the intramarginal nerve of the leaf are noteworthy characters of the Fijian plant. The specific epithet refers to the fact that the type-plant was a host to numerous bryophytes.

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